



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K8A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D119-646-241
Job Sheet 192610



Part No: D119-646-241

Job Qty: 1 ea

Part Name: AW119 Replacement Skidtube with Heavy Duty Wearplates - Fits LH or RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/28/19

Job Tracking No:

Due Date: 4/12/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG IIN-D119-646 REV D, D3887-045 REV E SHEETS 4, 6-11 IPP RevA: New issue DD verified by:EC IPP
REVB 12.11.05 (DEOD3887-B-1)(ecn 12-675) DD verf:JLM IPP REV:C 13.03.20 per chg003 ECN12-634 DD
verf:JLM IPP REV:D 17.05.19 as per dwg D3887 rev.e DD verf:JFS

Ship Via:

Bill of Materials



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K8A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S167522



Part: D119-646-241

Job No: 192610

Serial No/Batch: S167522

Revision:

Inspector:

Exp Date:

Instructions: FAA STC SR02024SE 18/10/17, TC STC LoA P-09-0407-RDIMS--

S167522-R-11

Job Routing									
Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	4/12/19	4/12/19	0.00	0.00	Start Up Skid tubes-1		
110	Skid tubes	1 pcs	4/12/19	4/12/19	0.77	0.05	Skid tubes-1		
120	Hand Finish	1 pcs	4/12/19	4/12/19	0.00	0.79	Hand Finish1		
121	QC	1 pcs	4/12/19	4/12/19	0.00	0.00	QC7-1		
122	QC	1 pcs	4/12/19	4/12/19	0.00	0.00	QC5		
130	Skid tubes	1 pcs	4/12/19	4/12/19	0.00	2.38	Skid tubes-1		
135	QC	1 pcs	4/12/19	4/12/19	0.00	0.00	QC5		
140	Skid tubes	1 pcs	4/12/19	4/12/19	0.00	2.38	Skid tubes-1		
150	QC	1 pcs	4/12/19	4/12/19	0.00	0.00	QC5		
160	Skid tubes	1 pcs	4/12/19	4/12/19	0.00	2.44	Skid tubes-1		
170	QC	1 pcs	4/12/19	4/12/19	0.00	0.00	QC5		
180	QC	1 pcs	4/12/19	4/12/19	0.00	0.00	QC10		
190	Hand Finish	1 pcs	4/12/19	4/12/19	0.00	0.33	Hand Finish2		
200	Powdercoat	1 pcs	4/12/19	4/12/19	0.00	0.20	Powdercoat1		
210	QC	1 pcs	4/12/19	4/12/19	0.00	0.00	QC3		
240	Hand Finish	1 pcs	4/12/19	4/12/19	0.00	0.79	Hand Finish4		
250	QC	1 pcs	4/12/19	4/12/19	0.00	0.00	QC5		
258	DC	1 pcs	4/12/19	4/12/19	0.00	0.00	DC		
260	Packaging	1 pcs	4/12/19	4/12/19	0.00	0.00	Packaging3-1		
270	QC21-FG	1 Ea	4/12/19	4/12/19	0.00	0.00	QC21		

Part Op 110 - 1- Inspect Mat'L D2500-1-190 for damage 2-Cut tube to length as per dwg D3887 (154.8") 3- Ensure squareness of Descriptions: ends and scribe batch#

130 - 1- Install drill Jlg DT9477 drill X-bolt spacer pilot holes using 3/16" drill first side only. 2- 2nd side, locating from first saddle holes use DT9861 A/B to drill 2nd side fwd saddle holes. 3- 2nd side locating from fwd saddle drill remaining crossbolt spacer holes using DT9477 4- Open crossbolt spacer holes to finished size as per dwg D3887 (section D-D and E-E) ***DO NOT OPEN FWD Saddles Holes*** 5- Deburr, blow out chips from inside of tube. 6- Bond web in place as per Dwg D3887 & QSI 015. A/R Sikaflex-291 5163445 Sikaflex expire date: 19/4/23 Start: 19-03-29 Time: 10:30 AM Finish: 19-03-30 Time: 10:30 PM ***** (Adhere for 12 hours) *****

140 - 1- Bend FWD end of tube using bender 1 and bend prog. D3887. ***Must use bending aid DT9544, ensure proper positioning*** 2- Cut FWD end of tube as per dwg D3887. ***Verify measurement*** 3- Buff out marks left from bending 4- Drill FWD cap holes using DT8215. Open FWD & AFT cap holes to 0.208" 5- Open FWD saddle holes to finished size as per dwg D3887 6- Drill FWD x-bolt spacer holes using DT9816 and open to finished size. (verify measurement) 7- Drill Tow ring hole, using DT10047 locate from FWD saddle hole. (verify measurement). Open to finished size. 8- Drill 1.87" and 3.74 holes using DT10045 A&B locate from FWD saddle hole. (verify measurement) as per dwg. 9- C'sink FWD cap hole as per detail "C" 10- Countersink crossbolt spacer holes, and prepare tube for welding, deburr. 11- Deburr and blow out chips from inside of tube.

160 - NOTE: TACK IN 2 MOST FWD X-BOLT SPACERS AND TEST FIT FWD GROUND HANDLING FIXTURE, IF FIXTURE FITS WELL THEN PROCEED. FIXTURE DT10091. 1- Insert crossbolt spacers. Weld as per QSI 004 and Dwg D3887. Remember to back drill each hole before welding the other side. Use aluminum rod A/R Aluminum Rod 138989 2- Grind cross bolt welds flush as per Dwg D3887. Ensure no pin hole. 3- Counterbore x-bolt spacer holes as per Dwg D3887 using DT10279. 4- Deburr and blow out chips from inside of tube 5- Pick D2855-5 cap and transfer drill missing hole. Deburr and identify cap with skid tube batch#.

170 - TEST FIT USING FIXTURE DT10091.

200 ***MASK AREA SHOWN ON SHEET 7, NOTE 9*** START TIME: 3:35 OVEN TEMPERATURE: 300° FINISH TIME: 7:05

240 - 1- Install wearplates as per Dwg D3887. 2- Inspect for foreign objects as per QSI 024 3- Install D2855-3 Cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 5163445 Sikaflex expire date: 19-4-11 4- Install Insert in D2855- Cap. Install cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 5163445 Sikaflex expire date: 19-4-11 5- INSPECT TORQUE ON BOLTS AS PER DWG.

BY: 5163445 DATE: 19-4-11 6- Wing Walk as per dwg QSI005 4.4 Batch: 5163-131

258 - Photocopy bluefile & type labels per PPP D119-646-241 CHG005

260 - Location : FG108

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2500-1-190	Ext'n - 'I' Beam Tube 4"	1 pcs (1 ea)	90-Start up Operation	3112963
D2579	Crossbolt Spacer	2 pcs (2 ea)	140-Skidtubes	5097840
D3885-1	Standard Web	1 pcs (1 ea)	140-Skidtubes	5141106
D3681-1	Spacer	12 pcs (12 ea)	160-Skidtubes	5110467 x 4 5145873 x 8
D3903-1	Spacer	12 pcs (12 ea)	160-Skidtubes	5144956
ALS4-1032-225	Rivnut	1 Ea (1 ea)	240-HandFinish	5059809
AN3C46A	Bolt	8 Ea (8 ea)	240-HandFinish	5059398
AN3C5A	Bolt	2 Ea (2 ea)	240-HandFinish	5149186
D2855-3	Cap	1 pcs (1 ea)	240-HandFinish	5126403
D2855-5	Cap	1 pcs (1 ea)	240-HandFinish	5002078
D3492-045	Plug Assembly	8 pcs (8 ea)	240-HandFinish	5164008
D3672-1	Washer, Phenolic	2 pcs (2 ea)	240-HandFinish	5169287
D3849-041	Fwd Heavy-Duty Wearplate, Std Skid Compatible	1 pcs (1 ea)	240-HandFinish	5116656
D3849-043	Aft Heavy-Duty Wearplate, Std Skid Compatible	1 pcs (1 ea)	240-HandFinish	5141322
D3904-1	Washer	16 pcs (16 ea)	240-HandFinish	5099569
MS21043-3	Nut	8 Ea (8 ea)	240-HandFinish	5067769
MS24694-C52	Screw	2 Ea (2 ea)	240-HandFinish	5061043
NAS1149C0332R	Washer	2 Ea (2 ea)	240-HandFinish	5148669
				009298

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2500-1-190	1	29	0
140-Skidtubes	D2579	2	118	0
	D3885-1	1	7	0
160-Skidtubes	D3681-1	12	204	0
	D3903-1	12	151	0
240-HandFinish	ALS4-1032-225	1	933	0
	AN3C46A	8	201	0
	AN3C5A	2	1,632	0
	D2855-3	1	32	0
	D2855-5	1	52	0
	D3492-045	8	36	0
	D3672-1	2	1,865	0
	D3849-041	1	1	0
	D3849-043	1	7	0
	D3904-1	16	64	0
	MS21043-3	8	1,220	0
	MS24694-C52	2	82	0
	NAS1149C0332R	2	4,772	0

Part Specifications

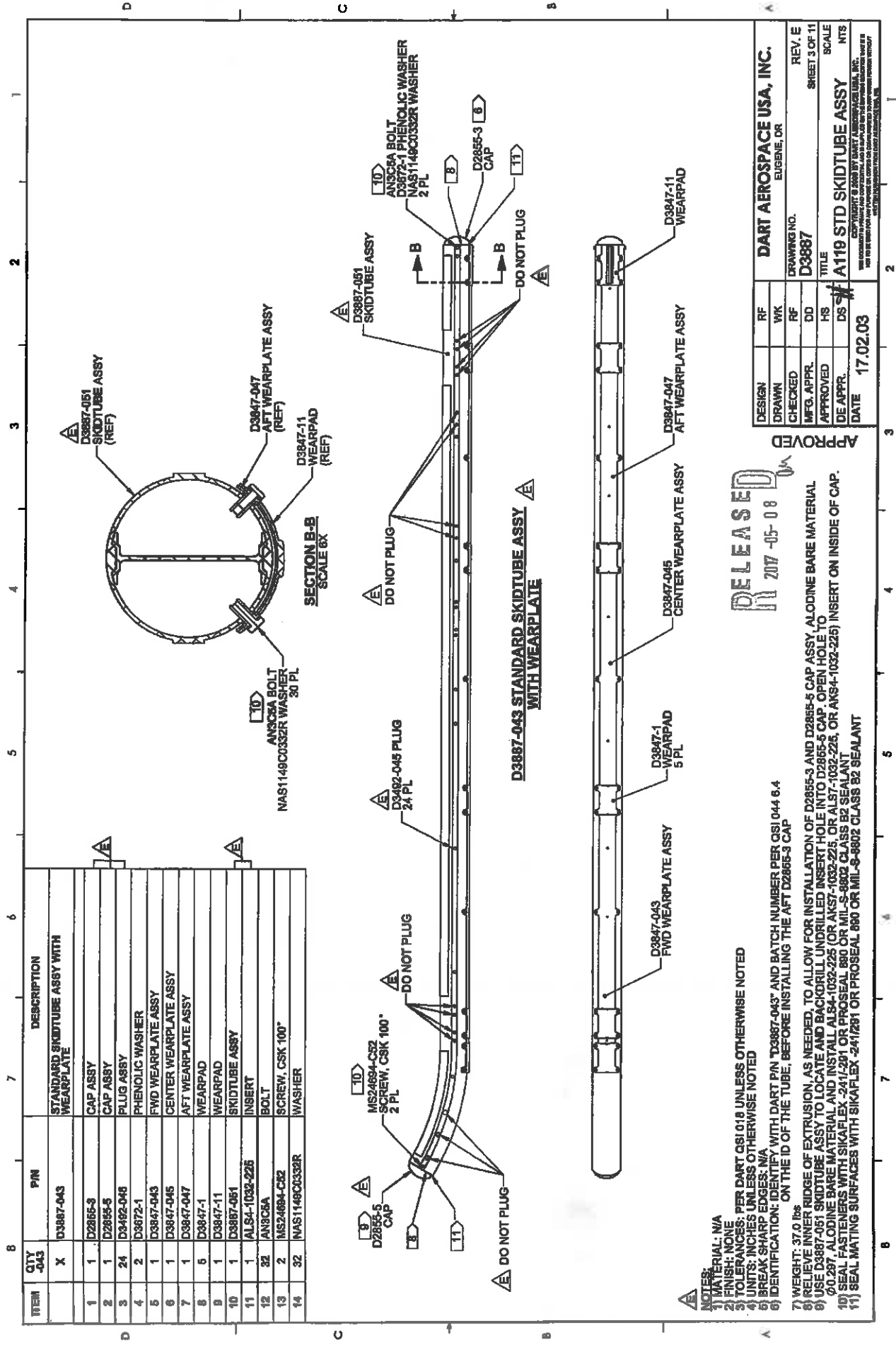
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Plex 3/28/19 11:39 AM Dart.lajeunesse.marie



10 M3
69-0728

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2017-05-08
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b7C
b7D

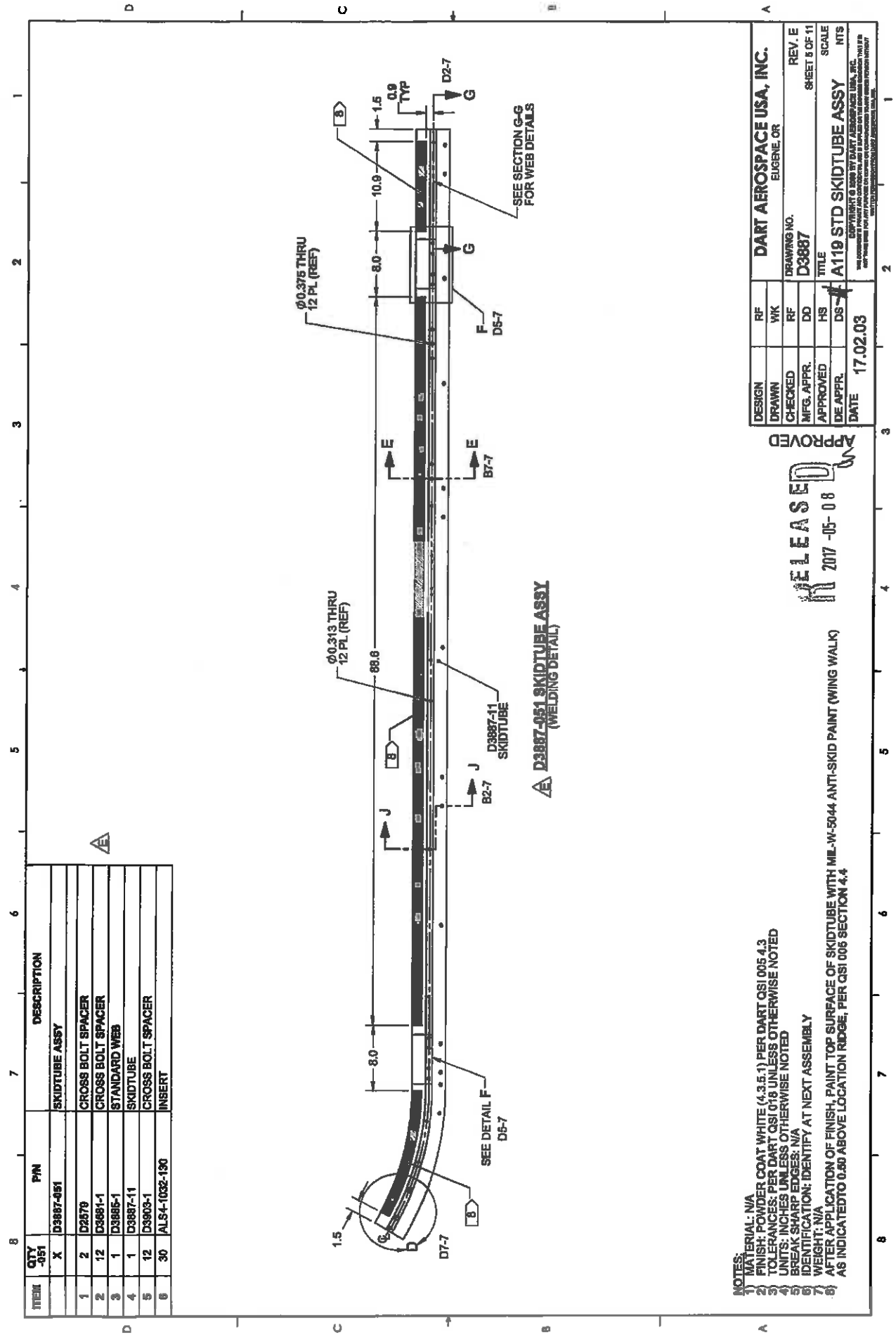


ITEM	QTY	PIN	DESCRIPTION
1	X	D3887-043	STANDARD SKIDTUBE ASSY WITH WEARPLATE
2	1	D2855-3	CAP ASSY
3	1	D2855-5	CAP ASSY
4	24	D3482-046	PLUG ASSY
5	2	D3872-1	PHENOLIC WASHER
6	1	D3847-043	FWD WEARPLATE ASSY
7	1	D3847-045	CENTER WEARPLATE ASSY
8	1	D3847-047	AFT WEARPLATE ASSY
9	5	D3847-1	WEARPAD
10	1	D3847-11	WEARPAD
11	1	D3887-081	SKIDTUBE ASSY
12	1	AL54-1032-225	INSERT
13	22	AN353A	BOLT
14	2	MS24684-C82	SCREW, CSK 100"
15	32	NAS1149C0332R	WASHER

DESIGN	RF	WK	RF	DD	HS	DS	DATE	17.02.03
DRAWN								
CHECKED								
APPROVED								
DE APPR								
DART AEROSPACE USA, INC.								REV. E
EUGENE, OR								SHEET 3 OF 11
DRAWING NO. D3887								SCALE
TITLE								NTS
A119 STD SKIDTUBE ASSY								
DART AEROSPACE USA, INC.								
EUGENE, OR								
DRAWN BY: J. B. BROWN								
CHECKED BY: J. B. BROWN								
APPROVED BY: J. B. BROWN								
DATE: 17.02.03								

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2017-05-08

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER PART Q81.018 UNLESS OTHERWISE NOTED
 - 4) TOLERANCES: PER PART Q81.018 UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART PIN "D3887-043" AND BATCH NUMBER PER Q81.044 6.4
 - 7) WEIGHT: 37.0 lbs
 - 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
 - 9) USE D3887-051 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP. OPEN HOLE TO Ø0.297, ALODINE BARE MATERIAL AND INSTALL AL54-1032-225 (OR AL57-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
 - 10) SEAL FASTENERS WITH SIKAFLEX -2471/291 OR PROSEAL 860 OR MIL-S-8802 CLASS B2 SEALANT
 - 11) SEAL MATING SURFACES WITH SIKAFLEX -2472/291 OR PROSEAL 860 OR MIL-S-8802 CLASS B2 SEALANT



ITEM	QTY	PIN	DESCRIPTION
	X	D3887-051	SKIDTUBE ASSY
1	2	D2879	CROSS BOLT SPACER
2	12	D3881-1	CROSS BOLT SPACER
3	1	D3885-1	STANDARD WEB
4	1	D3887-11	SKIDTUBE
5	12	D3903-1	CROSS BOLT SPACER
6	30	ALS-1032-130	INSERT

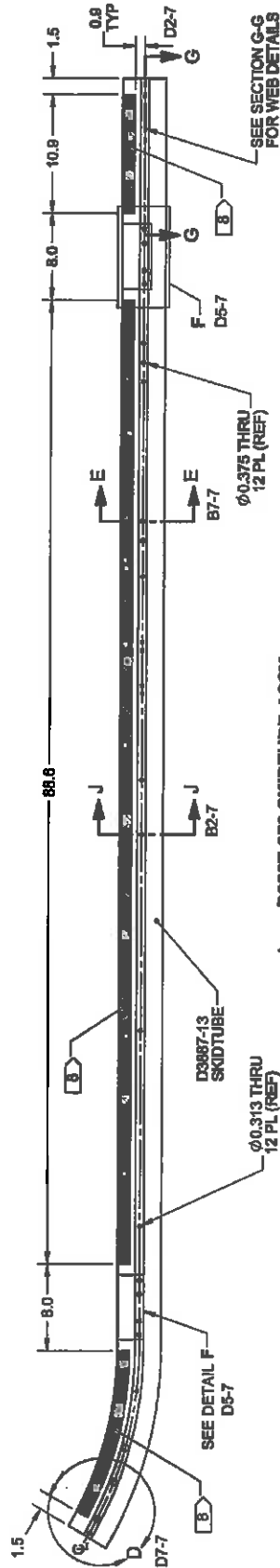
A D3887-051 SKIDTUBE ASSY
(WELDING DETAIL)

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY AT NEXT ASSEMBLY
 - 7) WEIGHT: N/A
 - 8) AFTER APPLICATION OF FINISH, PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 0.50 ABOVE LOCATION RIDGE, PER QSI 006 SECTION 4.4

DESIGN	RF	RF	DART AEROSPACE USA, INC.
DRAWN	WK	WK	EUGENE, OR
CHECKED	RF	RF	DRAWING NO. D3887
MFG. APPR.	DD	DD	REV. E SHEET 5 OF 11
APPROVED	HS	HS	TITLE A119 STD SKIDTUBE ASSY
DATE	17.02.03	DATE	SCALE NTS

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ITEM	QTY -053	P/N	DESCRIPTION
1	X	D3887-053	SKIDTUBE ASSY
2	2	D2879	CROSS BOLT SPACER
3	12	D3881-1	CROSS BOLT SPACER
4	1	D3885-1	STANDARD WEB
5	1	D3887-13	SKIDTUBE
6	12	D3903-1	CROSS BOLT SPACER



D3887-053 SKIDTUBE ASSY
(WELDING DETAIL)

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY AT NEXT ASSEMBLY
 - 7) WEIGHT: N/A
 - 8) AFTER APPLICATION OF FINISH, PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 0.00 ABOVE LOCATION RIDGE, PER QSI 005 SECTION 4.4

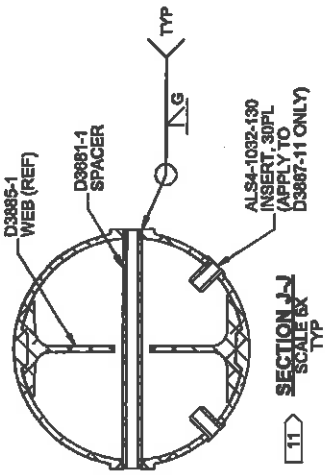
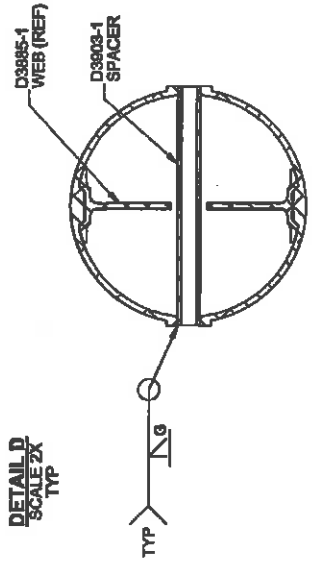
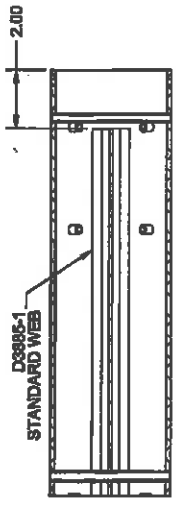
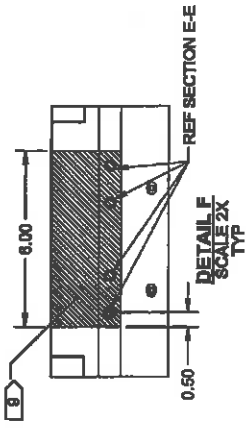
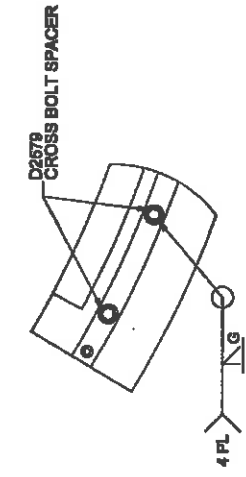
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DRAWN	RF	WV	EUGENE, OR
CHECKED	RF	WV	DRAWING NO. D3887
MFG. APPR.	DO	WV	REV. E
APPROVED	HS	WV	SHEET 8 OF 11
DE APPR.	DS	WV	SCALE NTS
DATE	17.02.03	WV	A119 STD SKIDTUBE ASSY

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1 2 3 4 5 6 7 8



(FOR 12X Ø0.313 HOLES PER SKIDTUBE)

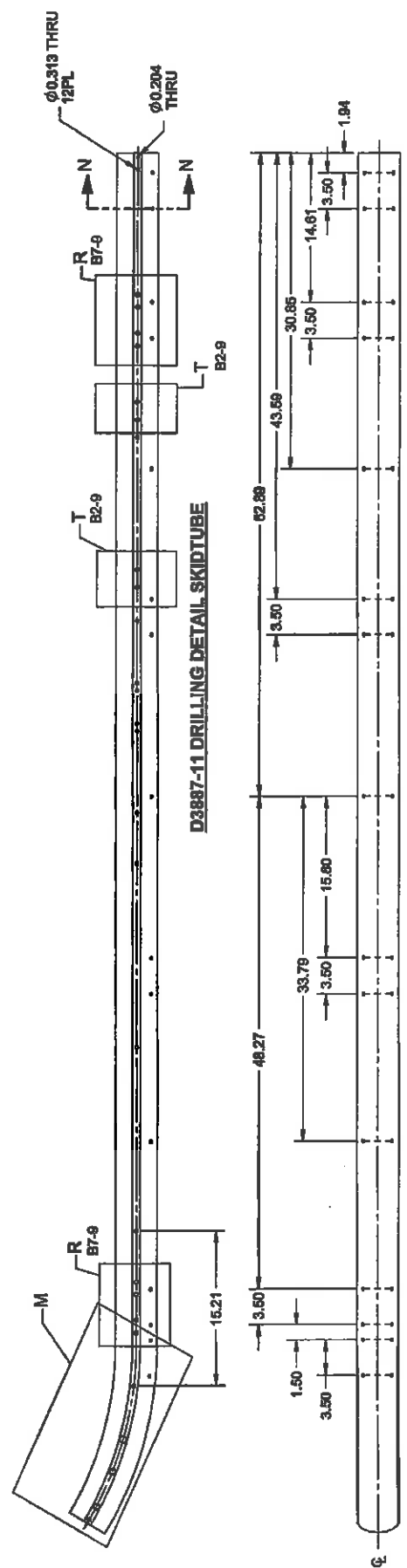
(FOR 12X Ø0.375 HOLES PER SKIDTUBE)

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK: SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
 - 7) WEIGHT: N/A
 - 8) WEIGHT: D3885-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH SILVER-24-24 ADHESIVE PER DART QSI 016 AFTER BENDING. ENSURE HOLES LINE-UP
 - 9) MASK THIS AREA AND DO NOT FINGER COAT
 - 10) AFTER DRILLING AND BENDING ASSEMBLY, PERFORM THE FOLLOWING FOR THE SECTION E-E Ø0.375 HOLES ONLY:
 - i) CHAMFER HOLES Ø0.475 x 45°
 - ii) INSERT D3803-1 SPACER
 - iii) WELD INTO PLACE AND GRIND FLUSH
 - iv) DEBURR HOLES
 - 11) AFTER DRILLING AND BENDING ASSEMBLY, PERFORM THE FOLLOWING FOR THE SECTION J-J Ø0.313 HOLES ONLY:
 - i) CHAMFER HOLES Ø0.354 x 45° OR 0.060 DEEP x 45° (BOTH SIDES)
 - ii) INSERT D3881-1 SPACER
 - iii) WELD INTO PLACE AND GRIND FLUSH
 - iv) DEBURR HOLES
 - 12) WELD PER DART QSI 004

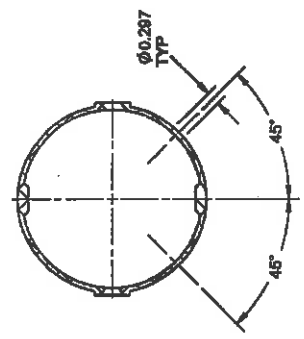
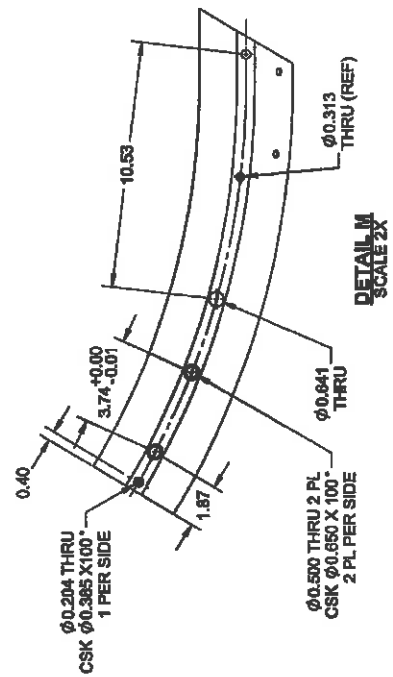
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CHECKED				REV. 7 OF 11	
MFG. APPR.				TITLE	A119 STD SKIDTUBE ASSY
APPROVED				SCALE	NTS
DATE	17.02.03				

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1 2 3 4 5 6 7 8



WEARPAD/WEARPLATE HOLE PATTERN
FOR REFERENCE ONLY
DRILL USING DT8831 TEMPLATE

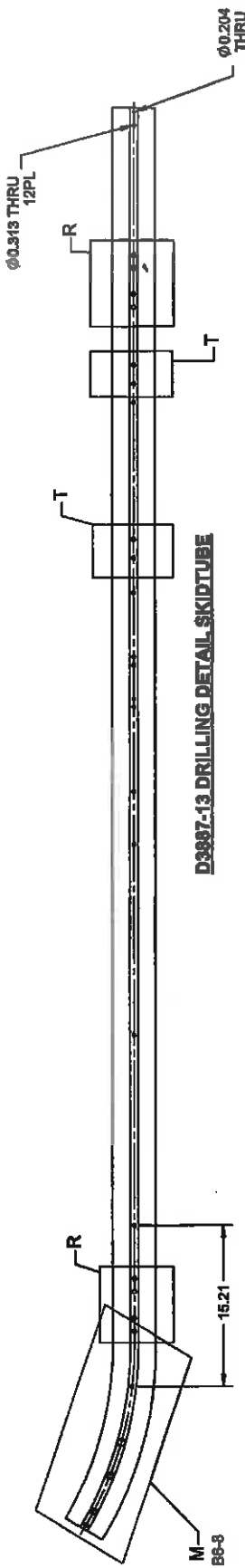


- NOTES:
- 1) MATERIAL: MAKE -11 FROM -1 BEND DETAIL
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
 - 7) WEIGHT: N/A
 - 8) USE DART DRILL TEMPLATE DT8831 TO LOCATE AND DRILL $\phi 0.287$ HOLES FOR WEARPAD/WEARPLATE INSERTS.

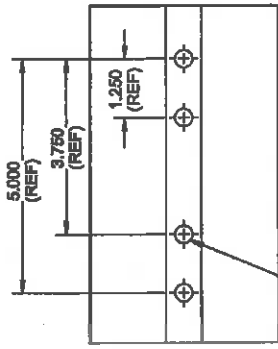
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APPROVED	HS	HS	DATE	17.02.03
DE APPR.	DS	DS	DATE	17.02.03
DART AEROSPACE USA, INC.				
EUGENE, OR				
DRAWING NO. D3887				
REV. E				
SHEET 8 OF 11				
TITLE A119 STD SKIDTUBE ASSY				
SCALE NTB				
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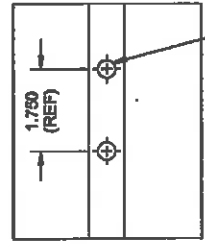
1 2 3 4 5 6 7 8



D3887-13 DRILLING DETAIL SKIDTUBE



DETAIL R
SCALE 4x
2PL



DETAIL I
SCALE 4x
2PL

- NOTES:
- 1) MATERIAL: MAKE -13 FROM -1 BEND DETAIL
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 019 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
 - 7) WEIGHT: N/A

DESIGN				DART AEROSPACE USA, INC.			
DRAWN	RF	WK	RF	DRAWING NO.	EUGENE, OR	REV. E	REV. E
CHECKED	RF	RF	RF	D3887		SHEET 9 OF 11	
MFG. APPR.	DD	DD	DD	TITLE		SCALE	NTS
APPROVED	HS	HS	HS	A119 STD SKIDTUBE ASSY			
DE APPR.	DS	DS	DS				
DATE	17.02.03						

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2017-05-08



DESIGN	RF	DART AEROSPACE USA, INC.	
DPAWN	WK	EUGENE, OR	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	DD	D3887	SHEET 10 OF 11
APPROVED	HS	TITLE	SCALE
DATE	DS	A119 STD SKIDTUBE ASSY	NTS
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2007-05-08
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